Appl. No. 09/498,398
Amdt. dated November 18, 2004
Preliminary Amendment

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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

Claims 1-12   (Canceled)

13.   (Previously Presented)   The method of claim 26, wherein use is made of an oscillator model for extracting signal segments from the first signal frame, the oscillator model including a codebook in which vectors of samples forms different states, or entries, in the codebook, the codebook storing a corresponding signal segment for each state.

14.   (Previously Presented)   The method of claim 13, wherein the second-listed producing step comprises a step of matching a true state of a trailing part of the first signal frame with said states in said codebook, and reading out a signal segment from said codebook that corresponds to the state having been matched with said true state.

15.   (Previously Presented)   The method of claim 13, wherein said signal segments of said codebook have variable lengths, each signal segment forming a trailing part of a signal frame, thereby enabling continuous transition from the expanded portion to a consecutive signal frame.

16.   (Original)   The method of claim 13, wherein time delays between said states in said codebook are incremental delays with a resolution of a fraction of a time between two samples.

17.   (Original)   The method of claim 14, wherein the states and the corresponding segments of said codebook are scaled in order to improve the matching with said true state.

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18.   (Original)   The method of claim 14, wherein merging of said true state is performed with the matching state of said codebook.

19.   (Previously Presented)   The method of claim 14, wherein the second-listed producing step involves performing the corresponding operations with respect to a heading part of the second signal frame being consecutive to the expanded portion.

20.   (Previously Presented)   The method of claim 26, wherein said first signal frame is either a sound signal frame resulting from a complete decoding operation of the first received frame, or an intermediate time-domain signal frame resulting from a partial decoding operation of the first received frame.

21.   (Previously Presented)   The method of claim 26, including the step of using an oscillator model, which oscillator model includes a codebook in which vectors of samples of a received digitized sound signal forms different states, or entries, in the codebook, the codebook storing a corresponding signal segment for each state.

Claims 22-25 (Canceled)

26.   (Currently Amended) A method for manipulating a received sound signal to produce a sound signal, wherein the received sound signal is received from a packet-switched network that looses some packets, the method comprising steps of:

receiving a first received frame from the packet-switched network, wherein:

the first received frame is part of the received sound signal, and

the packet-switched network has packet loss;

producing a first signal frame corresponding to the first received frame, wherein:

the first signal frame is part of the sound signal, and

a second received frame is normally produced contiguously with the first received frame;

determining after beginning the first-listed producing step that at least part of the second received frame is currently unavailable for production; and

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producing an expanded portion after the determining step, wherein:

the first signal frame and the expanded portion are contiguous parts of the sound signal, ~~and~~

the expanded portion corresponds to a different amount of the received sound signal than either the first or second received frames**, and**

the first signal frame and the expanded portion have different time lengths in the sound signal.

27.   (Previously Presented)   The method of claim 26, wherein the expanded portion is selected from the first signal frame based, at least in part, upon measures of periodicity.

28.   (Previously Presented)   The method of claim 26, wherein the determining step comprises a step of determining near the end of production of the first signal frame if the part of the second received frame is currently unavailable for production.

29.   (Previously Presented)   The method of claim 26, further comprising steps of:

determining after beginning the second-listed producing step that the second received frame is still unavailable for production;

producing a second expanded portion after the immediately-preceding determining step, wherein the expanded portion and the second expanded portion are contiguous parts of the sound signal.

30.   (Previously Presented)   The method of claim 26, wherein:
a playback time of the expanded portion is variable, and
the playback time is selected based, at least in part, upon the sound signal.

31.   (Previously Presented)   The method of claim 26, wherein:
the first signal frame includes a plurality of sound samples, and

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the expanded portion is determined with a time resolution finer than a sample rate of the plurality of sound samples.

32.   (Previously Presented)   The method of claim 26, further comprising a step of producing a second expanded portion based, at least in part, on some of the second received frame, wherein the expanded portion and second expanded portion are contiguous parts of the sound signal.

33.   (Previously Presented)   The method of claim 26, further comprising a step of merging the expanded portion and a contiguous, subsequent, portion of the sound signal using a periodicity measure, whereby any audible discontinuities between the expanded portion and second expanded portion are reduced.

34.   (Previously Presented)   The method of claim 26, wherein the signal frame corresponds to a plurality of received frames.

35.   (Previously Presented)   The method of claim 26, further comprising a step of merging the expanded portion and a contiguous, subsequent, portion of the sound signal based, at least in part, on overlap-add, wherein a time shift of the first signal frame and expanded portion is optimized based, at least in part, on correlation.

36.   (Previously Presented)   The method of claim 26, further comprising steps of:
    measuring overload of a jitter buffer;
    discarding some of the second received frame based, at least in part, on the overload; and
    merging a preceding and a subsequent portions of the sound signal after the discarding step.

37.   (Previously Presented)   The method of claim 36, further comprising steps of:

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determining if a signal fitting criteria between the preceding and subsequent portions is fulfilled; and

performing the discarding step only with the immediately-preceding determining step is fulfilled.

38. (Previously Presented) The method of claim 36, wherein a length of the some of the second received frame is based, at least in part, on the sound signal.

39. (Previously Presented) The method of claim 36, wherein the some of the second received frame comprises a plurality of sub-portions that are sequentially discarded.

40. (Previously Presented) The method of claim 36, wherein:

the merging step is based, at least in part, on overlap-add, and

any time-shift of the preceding and subsequent portions is optimized based, at least in part, on a measure of periodicity.

41. (Previously Presented) A computer-readable medium having computer-executable instructions for performing the computer-implementable method of claim 26.

42. (Previously Presented) A computer system adapted to perform the computer-implementable method of claim 26.

43. (Currently Amended) A method for manipulating a received sound signal to produce a sound signal, wherein the received sound signal is received from a packet-switched network that looses some packets, the method comprising steps of:

receiving a first received frame that is part of the received sound signal;

producing a first signal frame corresponding to the first received frame, wherein the first signal frame is part of the sound signal;

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determining after beginning the first-listed producing step that part of a second received frame currently unavailable for production due to latency;

producing a first expanded portion after the first-listed determining step, wherein:

the first expanded portion and the first signal frame are contiguous parts of the sound signal,

the first signal frame and the second signal frame would be contiguous parts of the sound signal in situations where the part of the second received frame is available for production, and

the first expanded portion is a different size than either the first or second received frames;

receiving a third received frame that is part of the received sound signal;

producing a third signal frame corresponding to the third received frame, wherein the third signal frame is part of the sound signal;

determining after beginning the second-listed producing step that part of a fourth received frame currently unavailable for production due to packet loss; and

producing a second expanded portion after the second-listed determining step, wherein:

the second expanded portion and the third signal frame are contiguous parts of the sound signal,

the third signal frame and the fourth signal frame would be contiguous parts of the sound signal in situations where the part of the fourth received frame is available for production, ~~and~~

the second expanded portion is a different size than either the third or fourth received frames**, and**

the first and third signal frames have a frame size that is different from a size of the first expanded portion.

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44.   (Currently Amended) A method for manipulating a received sound signal to produce a sound signal, wherein the received sound signal is received from a packet-switched network that looses some packets, the method comprising steps of:

receiving a first received frame that is part of the received sound signal;

producing a first signal frame corresponding to the first received frame, wherein:

the first signal frame is part of the sound signal, and

a second received frame is produced contiguously with the first received frame when the second received frame is available;

determining after beginning the first-listed producing step that part of the second received frame is currently unavailable for production due to packet loss; and

producing an expanded portion after the determining step, wherein:

the first signal frame and the expanded portion are contiguous parts of the sound signal,

the expanded portion replaces at least some of the second received frame, and

the expanded portion **has a size that** is a different size than **a frame size of either** the first signal frame ~~or second received frames~~.

45.   (Previously Presented)   The method of claim 26, further comprising a step of producing a second signal frame corresponding to the second received frame, wherein the expanded portion and the second signal frame are contiguous parts of the sound signal.

46.   (Previously Presented)   The method of claim 26, further comprising a step of time shifting the expanded portion relative to the first signal frame whereby periodicity of the sound signal is improved across a boundary between the first signal frame and the expanded portion.

47.   (New) The method of claim 26, further comprising a step of producing a second signal frame corresponding to the second received frame, wherein the first and second signal frames have a first frame size that is different from a size of the expanded portion.

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48.　　(New)　The method of claim 43, wherein the second expanded portion has a second size different from the frame size.